

Program Description/Textbook or Print Instructional Material

Vendor: Houghton Mifflin Company Web Address: www.eduplace.com

Title: Houghton Mifflin Mathematics

Author: Bruce Vogeli, et. al. Copyright: 2002

ISBN: See attachment Course/Content Area: Mathematics

Intended Grade or Level: K through 6 Readability Level: See attachment

List Price: See attachment Lowest Wholesale Price: See attachment

FEATURES

DISCLAIMER: The features of each book or program were developed by the publisher and do not reflect the opinion of the State Review Team, State Textbook Commission, nor of the Kentucky Department of Education.

Content *Houghton Mifflin Mathematics® 2002* is a powerful new program developed to meet new district, state, and national mathematics standards. With a solid research base and proven instructional strategies, *Houghton Mifflin Mathematics® 2002* gives teachers and students all the tools necessary to teach and understand grade-level content. Designed to help every student at every level succeed, *Houghton Mifflin Mathematics® 2002* provides stepped-out lessons with built-in, scaffolded support that emphasizes manipulatives, models, language and symbols. Specific resources are also available for students needing extra support, intervention, challenge and English language learning.

Houghton Mifflin Mathematics® 2002 provides a balanced approach to mathematics development. Activity lessons use manipulatives and models to teach new concepts. Skills lessons make the link between manipulatives, language, and symbols through stepped-out, highly visual instruction boxes. Problem Solving lessons are interactive and focus on helping children use their new math understandings, thinking, and reasoning skills to solve problems. Direct Instruction, activity-based experiences, small and large group learning, are included, when and where appropriate, in the *Houghton Mifflin Mathematics® 2002* instructional plan. The Teacher's Editions are the main teacher support component for *Houghton Mifflin Mathematics® 2002*. Throughout the grades, teachers are provided with mathematics background, teaching suggestions, informal assessment questions, strategies and materials for Meeting Individual Needs, and a comprehensive organizational framework for mathematics instruction.

The development of mathematics vocabulary is a unique element of *Houghton Mifflin Mathematics® 2002*. New and review vocabulary are identified and highlighted in each lesson. New vocabulary is always defined in context. Every chapter in Grades 3-6 begins with a Reading Mathematics lesson. These lessons focus on math vocabulary that is critical for students to understand in order to be successful with the chapter content. A special feature of each Reading Mathematics lesson is the "Reading Words and Symbols" section. Here, students make the connection between mathematics in its symbolic form and mathematics as language as they use math vocabulary in context.

Problem Solving is another major focus of *Houghton Mifflin Mathematics® 2002*. Beginning in Kindergarten, and continuing throughout the grades, children learn how to use problem solving strategies and skills to solve problems, then apply these understandings in daily problem-solving and reasoning activities. Problem Solving for Success, a problem solving intervention booklet for each grade, uses elements of the East Asian model of instruction to teach a visual approach that organizes information for problem solving.

Student Experiences The clean, uncluttered organization of *Houghton Mifflin Mathematics® 2002*, its clear, unambiguous direction lines, the art, graphics, and photos that connect to the mathematics, and lesson contexts that are age and interest-appropriate make *Houghton Mifflin Mathematics® 2002* accessible and highly engaging to students. In particular, *Houghton Mifflin Mathematics® 2002* provides primary students with the opportunity, and space, to "Draw or Write to Explain" in all problem solving activities and lessons. A problem solving picture

dictionary makes reading, and solving, content-rich problems doable and fun. At Grades 3-6, the “Math is Everywhere” curriculum connections, full-page lessons that acknowledge and explain alternative algorithms, and fast-paced, daily two-minute math reviews are elements that make math meaningful and fun. For all students, there are daily opportunities to explain reasoning and thinking, to write and talk about mathematics, to complete brain teasers, work with a partner or small group to play a math game, or log on to Houghton Mifflin’s website – www.eduplace.com - to take a practice test, work on a math project, or gather data to share with other students.

Assessment *Houghton Mifflin Mathematics® 2002* offers a comprehensive assessment package. Grade level inventories assess global prerequisite skills. Every chapter begins with a two-part pretest that assesses prerequisite skills and new chapter content. Special reteaching and challenge resources are linked to the chapter pretest. Ongoing assessments – Quick Checks – appear three to four times per chapter. Diagnostic prescriptive intervention materials are linked to the Quick Checks to ensure that reteaching is focused, practical and timely. In-book Chapter Reviews, Chapter Tests, and Performance Assessment assess chapter content. The Assessment Guide includes the Grade Level Inventory, Chapter Pretests, and Chapter Tests in multiple choice and free response format. The Performance Assessment book provides a performance assessment option for each chapter test along with anchor papers and rubrics. A special Kentucky-specific test prep booklet will help prepare students for the important KCCT.

Organization The *Houghton Mifflin Mathematics® 2002* student books and teacher’s editions are organized by chapters (Kindergarten, 10 chapters; Grades 1-6, 12 chapters). Each chapter is organized into content focus sections. Each content focus section represents a different level of understanding in the development of the topic (conceptual understanding → practice → application). Quick Checks are placed at the end of each section and link to specialized intervention resources. Lessons in *Houghton Mifflin Mathematics® 2002* contain four parts: Learn, which sets the lesson context, and includes the step-by-step instruction; Guided Practice, which provides opportunities for students to practice new content with scaffolded support; Explain Your Thinking, where students explain their understandings and reasoning; and Independent Practice and Problem Solving, that includes practice exercises, word problems, and journaling opportunities. In Grades 3-6, the daily lessons also include mixed review and test prep practice. The Teacher’s Editions include a chapter organizer, math background, daily routines, and complete lesson plans for each lesson.

Resource Materials - See attachment.

RESEARCH DATA AND EVIDENCE OF EFFECTIVENESS

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The Professional Teaching Standards from NCTM were a driving force in the development of *Houghton Mifflin Mathematics*. Our authors combined the recommendations of the Professional Standards along with the curriculum criteria from key states and districts (including the Kentucky Core Content Standards from Mathematics) to develop the program scope and sequence, tables of contents, and lesson outlines for each grade level.

In 1999, Houghton Mifflin Company commissioned an independent social science research firm, to evaluate the effectiveness of a set of resources that approximated the scope and sequence, content development and lesson design of the proposed *Houghton Mifflin Mathematics*. A total of 21 schools were involved in the study: 6,567 students and 201 teachers.

In the sample of second graders to sixth graders, students' scaled scores on the SAT-9 ranged from approximately 400 to approximately 800, and mean student gain over the course of one grade for students using the Houghton Mifflin Curriculum was approximately 30 points.

There were, however, greater gains under certain conditions. The students taught by experienced teachers had greater gains than students taught by new teachers. Classrooms in which 25-30% of the students were identified by their teacher as achieving below grade level had gains greater than 30 points.

In addition, teacher panels, consisting of 78 teachers, evaluated and used lessons from *Houghton Mifflin Mathematics* in their classrooms. Each chapter at every grade level was reviewed, used, or critiqued by teacher panel members and their students to assure clarity, cohesiveness, and effectiveness.

ATTACHMENT

HOUGHTON MIFFLIN MATHEMATICS © 2002

Author(s): Vogeli et al.

Student Edition	Grade Level	Readability (Flesch-Kincaid Grade Level Score)	ISBN	List Price	Lowest Wholesale Price
Student Edition (single volume)	K	N/A	0-618-09924-7	\$ 24.00	\$ 18.00
Student Edition (single sheets)	K	N/A	0-618-27569-X	\$ 24.00	\$ 18.00
Student Edition with Individual Student Manipulative Bag	K	N/A	0-618-11909-4	\$ 41.20	\$ 30.90
Student Edition (single volume)	1	1.0	0-618-09975-1	\$ 34.00	\$ 25.50
Student Edition (Set of 4 volumes)	1	1.0	0-618-27324-7	\$ 34.00	\$ 25.50
Student Edition with Individual Student Manipulative Bag	1	1.0	0-618-11910-8	\$ 56.64	\$ 42.48
Student Edition	2	2.2	0-618-09976-X	\$ 34.00	\$ 25.50
Student Edition with Individual Student Manipulative Bag	2	2.2	0-618-11912-4	\$ 56.64	\$ 42.48
Student Edition	3	3.5	0-618-09977-8	\$ 61.32	\$ 45.99
Student Edition with Individual Student Manipulative Bag	3	3.5	0-618-11913-2	\$ 80.36	\$ 60.27
Student Edition	4	4.3	0-618-09978-6	\$ 61.32	\$ 45.99
Student Edition with Individual Student Manipulative Bag	4	4.3	0-618-11914-0	\$ 80.36	\$ 60.27
Student Edition	5	5.4	0-618-09979-4	\$ 61.32	\$ 45.99
Student Edition with Individual Student Manipulative Bag	5	5.4	0-618-11915-9	\$ 75.72	\$ 56.79
Student Edition	6	6.1	0-618-09980-8	\$ 61.32	\$ 45.99
Student Edition with Individual Student Manipulative Bag	6	6.1	0-618-11916-7	\$ 75.72	\$ 56.79

Resource Materials

Available Ancillary Materials

Reteach Workbook; Challenge Workbook; Problem Solving for Advanced Learners; English Language Learners Handbook; Math, Reading and Listening Center; TI-MathMate™ calculator; TI-108™ calculator; TI-Math Explorer™ calculator; TI-Math Explorer Plus II™ calculator; Graphers CD-ROM for Windows® or Macintosh®; Math Arena™ for Windows® or Macintosh®; Easy Sheet CD-ROM for Windows® or Macintosh®; Data Explorer CD-ROM for Windows® or Macintosh®

Also, additional copies of all of the gratis items may be purchased separately.

Gratis items to be Provided and Under What Conditions

Upon adoption and purchase of *Houghton Mifflin Mathematics* Houghton Mifflin Company will provide the following materials at no charge for the first year of implementation of the adoption, upon request:

Provided per teacher with the purchase of 22 corresponding Pupil Editions for Grades K-2 and 25 corresponding Pupil Editions for Grades 3-6.

Teacher Edition

Chapter Support Folders (Blackline Masters for Practice, Reteach and Challenge organized by chapter & lesson)

Teacher Resource Book

Spiral Review Masters (Grades 1-6)

Practice, Reteach, Challenge and Spiral Review Answer Key

Assessment Guide

Problem of the Day Transparencies

Vocabulary Cards (Grades K-2)

Overhead Transparency Activities (Grades K-2)

Overhead Transparency Activities and Teaching Guide (Grades 3-6)

Overhead Manipulative Kits

Problem Solving for Success Masters with Teaching Guide (Grades 1-6)

MathSteps CD-ROM Tutorial Starter Kit

Activity Guide (Grades 3-6)

Test Generator CD-ROM (Grades 1-6)

Kentucky Lesson Planner CD-ROM

Monthly KCCT Practice Test (Grades 1-6)

Combo Classroom Management Guide

Performance Assessments Blackline Masters (Grades 1-6)

Big Books (Grades K-2)

Plus, Choose Option A or B:

OPTION A- Choose 1 of the following:

Practice Books (1 for each student book purchased for 6 years)

Problem Solving Workbooks (Grades 1-6) (1 for each student book purchased for 6 years)

Student Manipulative Bags (Grades K-2 receive 11; Grades 3-6 receive 12)

OPTION B- Choose any 2 of the following:

MathSteps Pupil Editions (Grades K-2 receive 11 and Grades 3-6 receive 13) and Mathsteps Teacher Edition

Practice Books (1 for each student book purchased, for the first year of the adoption only)

MathSteps Computational Skills Tutorial Kit

Math Center

Every Day Counts Calendar Math Kit (Grades K-2)

Statement

Houghton Mifflin Mathematics, Copyright 2002, will be available in alternative format for use by students with disabilities. The format will be computer-readable by speech synthesis software (e.g., text reader or screen reader) and readily converted to Braille.